IBM

Manual of Operation

421

IBM 421 Accounting Machine

Sterling Supplement

IBM 421 Accounting Machine

Manual of Operation

Sterling Supplement

Supplementing Form No. 212-5644

IBM

IBM 421 Accounting Machine
Control Panel Diagram

UK FORM 28-6909

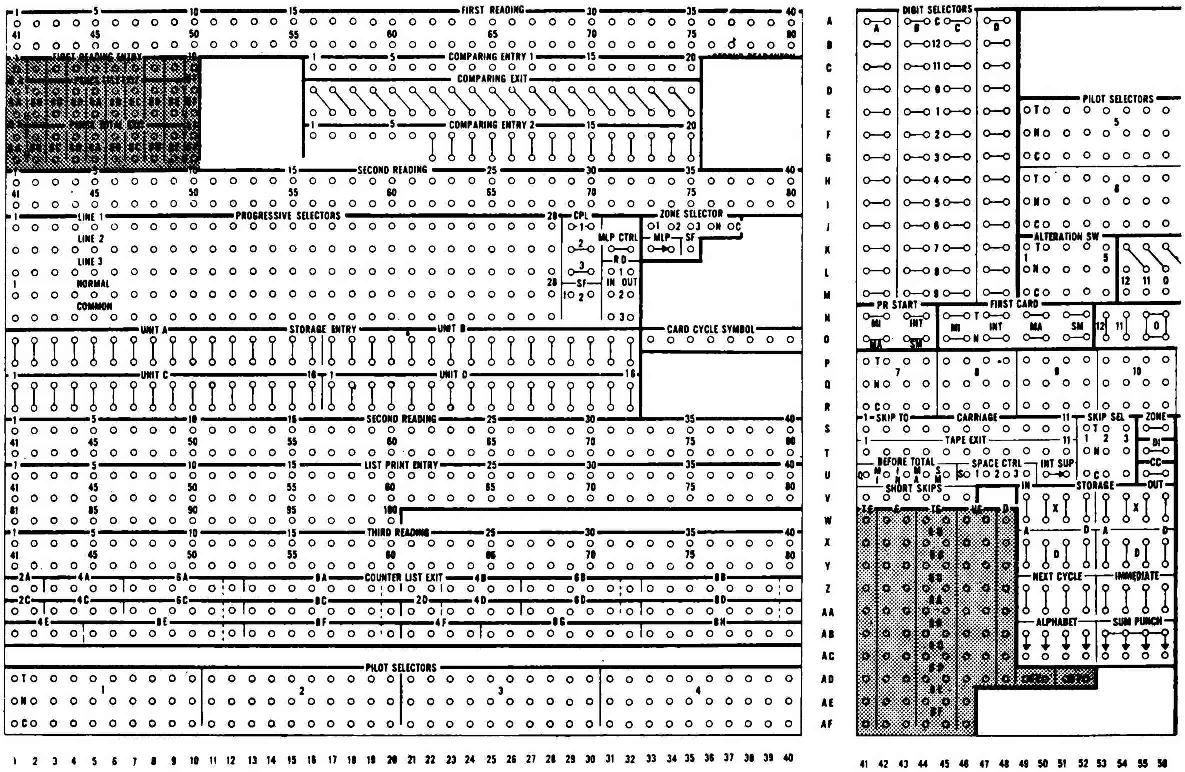


Figure 1: Mechanical sterling counter hubs.

421 Sterling Supplement

Section 1

Provision can be made on all models of the 421 Alphabetic Accounting Machine for accounting in sterling currency. The main differences between a machine so equipped and a normal decimal machine are the substitution of some of the counter groups for special counter groups able to deal with sterling amounts and the addition of special hubs to recognise pence amounts punched in a single card column.

Sterling counters are able to perform all the normal counter functions of addition, subtraction, net-balancing and so on. The machine features fitted to enable it to deal with sterling currency are extremely flexible and do, indeed, find use in applications not directly concerned with sterling. No limitations are imposed on card design and very few on the layout of the printed output.

This manual is intended as a supplement to the 421 Accounting Machine Manual of Operation (Form no. 212-5644) and should be read in conjunction with it. Only those features directly concerned with the use of the sterling device will be described here, together with brief explanations of their operation. These explanations are not essential to the understanding of control panel wiring principles and may be omitted if desired.

There are two types of sterling counter for the 421: mechanical sterling counters, which are fitted to 100 line per minute machines manufactured before 1959, and relay sterling counters, which are fitted to all 150 line per minute machines and to 100 line per minute machines of current manufacture. Control panel wiring for these two types differs in detail and so will be described in Section 2 of this manual for mechanical counters and in Section 3 for relay counters. One or other of these sections, as appropriate to the particular type to be used, should be read. The remaining sections of the manual deal with subjects common to both types of counter.

Coding

In order to save space on the card and to increase punching speed, pence are punched in a single card column. Pence amounts of up to 9 pence are represented by the corresponding 0 to 9 digit punches. An X (or 11) punch represents 10 pence, and an R (or 12) punch 11 pence. Amounts greater than 9 pence are, however, printed on two standard typebars, giving reports a well-spaced appearance and allowing considerable freedom in form design. Special typebars to print pence are not required.

Shillings are punched into two columns. Amounts greater than 19 shillings must be punched as pounds and shillings; for example, 58/6 must be expressed as £2 18*s* 6*d* for punching, as the tens-of-shillings position of a sterling counter will only accept 0 or 1. There are no restrictions on the punching of pounds.

An X overpunch in the junior column of a sterling field cannot be used to denote a negative amount. The usual convention for sterling is to put the X punch over the senior column of the field.

Counters

Any or all of the six- and eight-position counter groups 6A, 8A, 6B, 8B, 6C, 8C, 6D and 8D may be substituted by sterling counters. On newer machines, all of these counter groups that are fitted to the machine are equipped for sterling. A sterling counter group has its 'units' position capable of accumulating up to 11 pence. The 'tens' and 'hundreds' positions are used for shillings and tens of shillings respectively; the latter position is special in that it can only accept 0 and 1. The remaining positions of the counter are standard decimal positions and are used to accumulate pounds. Smaller counters may be coupled to a sterling counter to increase its capacity.

Carries between the junior five positions are not internally wired, as they are on decimal counters. Carry wiring is described in Section 4 of this manual.

Section 2: Mechanical Sterling Counters

Mechanical sterling counters are found on pre-1959 100 line per minute machines. Each counter group has one basis 12 wheel, for accumulating pence, and one basis 2 wheel, for accumulating tens of shillings. The other positions are standard decimal (basis 10) wheels. The special basis wheels cannot be used for decimal work.

Principle of Operation

A counter recognises the value represented by a hole in a card according to the time in the cycle at which the impulse from the reading brush is received at the counter entry. When the counter is adding, this impulse causes the counter wheel to start turning. It continues to turn until it is automatically stopped at 0 time. When the counter is subtracting, the counter wheel is set in motion automatically at the beginning of the cycle and the reading brush impulse stops it. This method of subtraction by addition of the 9's complement is fully described in the 421 manual of operation.

For the pence wheel, however, since X and R times occur after 0 time in the machine cycle and yet represent amounts greater than 9 pence, special provision has to be made to deal with them. Whereas digits 9 to 0 are normally read into the counter from Second Reading, X and R punches representing 10 and 11 pence must be read from First Reading and entered into pence storage delay relays.* From these storages, impulses are emitted at the beginning of the next card feed cycle at one and two points before 9 time for 10 pence and 11 pence respectively. These impulses are known as 'early 10' and 'early 11' impulses.

---

* When MLP is being used or the accounting machine is part of a Calculating Group, digits are read from Third Reading and the zones from Second Reading. This does not affect the operation of the pence storages, which is exactly as described above. The point to note is that the digits and the zones are read one card feed cycle apart.

If the counter has been impulsed to add, the pence value – read from the card if less than 9 pence, emitted from storage if 10 or 11 pence – is used to start the counter wheel turning. The wheel is automatically stopped at 0 time and so the pence value is added into the wheel. A carry impulse is emitted from the Pence Carry Exit if, during the addition, the pence wheel turned from 11 to 0. This impulse is normally wired to the Units of Shillings Carry Entry, to cause one shilling to 'carry over'.

If the counter has been impulsed to subtract, the pence wheel is started turning at early 11 time, that is, two points ahead of the other wheels. It should be noted that a 9-12 Card Cycles impulse or a Program Steps Exit impulse begins early enough to start the counter wheel at this point. Special sterling cycles impulses are not needed on the 421. The pence wheel is stopped in the normal way by the impulse being read in – from the reading brush for up to 9 pence, from pence storage for 10 and 11 pence. Thus the 11's complement of the amount is added into the wheel. Figure 2 illustrates the subtraction of a 4 from a decimal wheel and from a pence wheel. The 9's complement of 4 is 5; and the 11's complement is 7.

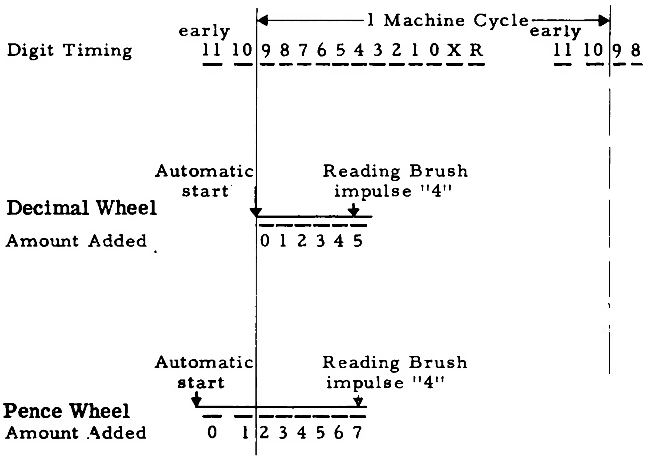


Figure 2: Subtraction from decimal and pence wheels.

Control Panel Wiring

Control panel wiring for all operations of a sterling counter group is the same as for decimal counters except for the pence wheel input and output and the need for wiring the carries between positions. Carry wiring will be dealt with in Section 4. The field wiring only is described in detail below. Counter control wiring, such as the control of plus, minus, reset and so on, is exactly the same as for decimal counters as is described in the 421 Manual of Operation.

a. Read In from a Card (Figure 3)

As described earlier, X and R punches in the pence column are read from First Reading while all other data to be entered into the counter is read at Second Reading. Therefore, to accumulate pence from a card, First Reading Entry (C. 1-10) is wired from the pence column at first reading and the junior position of the normal Counter Entry is wired from the same column at Second Reading. Since the First Reading Entry only accepts X and R impulses and the normal Counter Entry accepts only 0 to 9 impulses, no amounts will be entered twice. Other positions of the counter are wired as for decimal working.

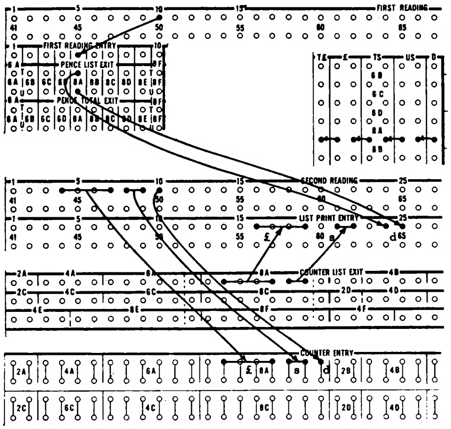


Figure 3: Counter entry, with list printing (field and carry wiring only).

b. Read In with Pence Listing (Figure 3)

The read-in wiring is as described in *(a)* above. The amount being entered into the pence wheel is made available at the appropriate Pence List Exits (D-E. 1-10) in a form suitable for printing tens and units on separate typebars. The Tens Exit does not emit if the amount entered into the pence wheel is 9 pence or less. The junior position of Counter List Exit is not used – the hub is internally disconnected. The other positions of Counter List Exit are used in the normal way.

c. Total Printing (Figure 4)

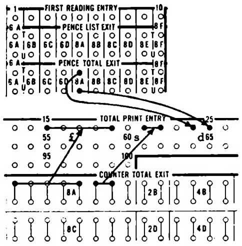


Figure 4: Total printing (field wiring only).

The junior position of the normal Counter Total Exit is not used. Instead, the amount in the pence wheel is made available at the appropriate Pence Total Exit hubs (F-G. 1-10) in a form suitable for printing the Tens and Units of pence on separate typebars. The Tens Total Exit hub does not emit if the amount being read out of the pence wheel is 9 pence or less.

d. Transfer to a Counter (Figure 5)

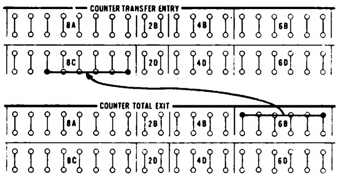


Figure 5: Sterling counter transfer (field wiring only).

Wiring for total transfer between sterling counters is the same as for transfer between decimal counters: the Counter Total Exits (including the junior position) of the counter to be read out are wired to the Counter Transfer Entry of the receiving counter.

e. Transfer to Storage

Pence from a mechanical sterling counter can only be transferred to a storage unit directly by use of the Pence Total Exit Tens and Units hubs described above. This enters the tens and units digits of pence into two adjacent positions of the storage unit. Pence cannot be entered into a single storage unit position, except by the use of selectors to cause 10 pence to be entered as an emitted X and 11 pence as an emitted R. This may occasionally be of use in summary punching problems.

f. Summary Punching

The Counter Punch Exits are wired to Summary Punch Entry hubs. This wiring is all that is required to cause pence to be punched into a single column of the summary card, an X punch for 10 pence and an R punch for 11 pence.

g. List Printing without Accumulating

Pence Listing devices must be fitted to enable pence to be listed without using a counter. These optional features read 10 pence and 11 pence at First Reading and convert them to tens and units impulses to print on two typebars when the card is at Second Reading. Pence amounts of up to 9 pence are read at Second Reading and are filtered through the device to operate the units typebar directly. The device has four hubs for each unit fitted: First Reading and Second Reading Entries and Tens and Units Pence List Exits. Location of these hubs on the control panel varies depending on whether other special features are fitted to the machine.

Section 3: Relay Sterling Counters

Relay sterling counters are fitted to all 150 line per minute machines and to 100 line per minute machines manufactured after 1 January 1959. Only the special sterling positions – that is, the pence and the tens of shillings positions – consist entirely of relays. The other positions of the counter – for pounds and units of shillings – are standard decimal counter wheels. Relays are used for the special positions to make possible a change in their basis of operation. The special wheels of mechanical sterling counters cannot change their basis: a 12-point or a 2-point counter wheel cannot be modified readily to become a 10-point wheel. However, it is comparatively simple to switch out, by control panel wiring, relays from a basis 12 relay counter to make it operate on a basis of 10. This allows a sterling counter to be used for decimal quantities without loss of capacity. Use of sterling counters for decimal work is described in Section 5 – Non-Sterling Uses.

Principle of Operation

Relay counters are of the impulse operated type. That is to say, a hole in the card causes a corresponding number of impulses to be directed to the counter. Each time an impulse is received, the counter steps on to the next condition. For example, if a 3 is to be added into a relay counter position standing at 0, a train of three impulses causes the counter to step successively through the conditions for 1, 2 and 3. The relays are of the latch type; that is they remain transferred until dropped out by an impulse to their latch-release coil. A chain of these relays is connected so that a train of impulses causes them to latch successively and then to drop out in the reverse order. The last relay in the chain, however, is not dropped out until the counter has stepped completely through to 0 again, when a carry impulse is passed on to the next senior counter position.

Figure 7 shows which of the relays in a basis 12

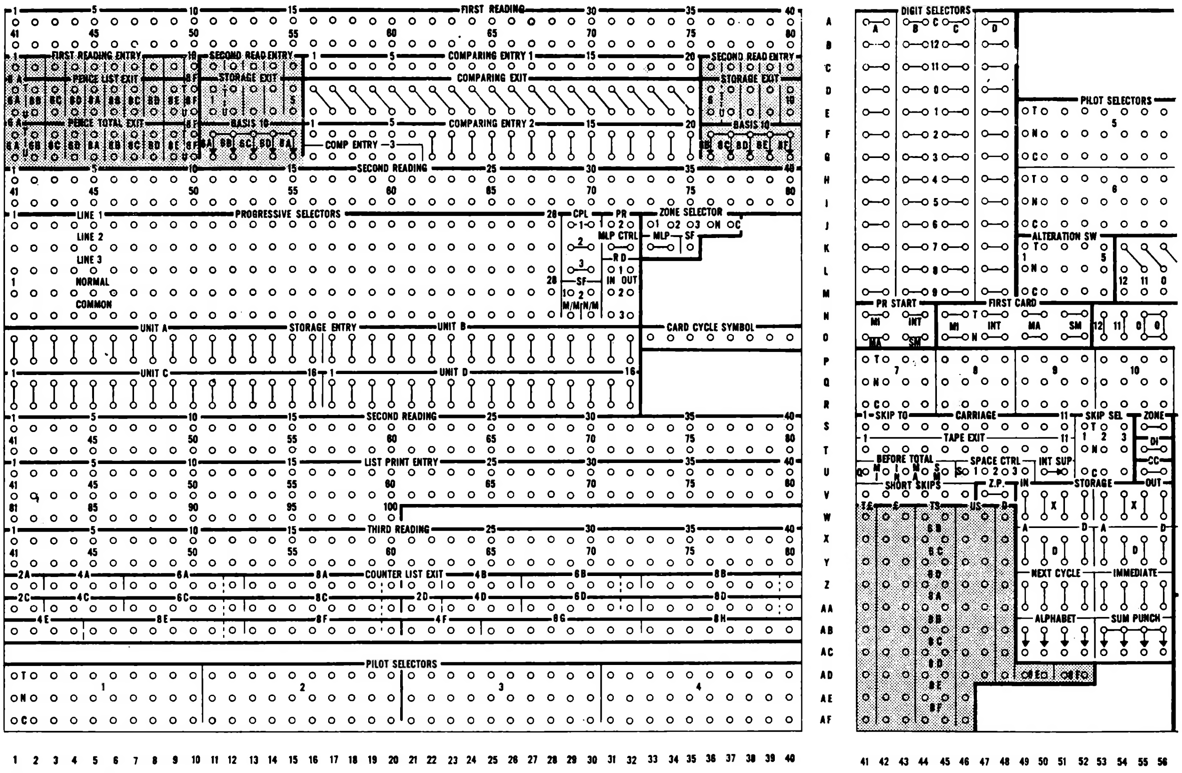


Figure 6: Relay sterling counter hubs.

Value	Code Relays Latched
0	None
1	I
2	I II
3	I II III
4	I II III IV
5	I II III IV V
6	I II III IV V VI
7	I II III IV VI
8	I II III VI
9	I II VI
10	I VI
11	VI
12 (=0)	Carry

Figure 7: Pence Relay Counter Code Relays

counter position are picked up to indicate the numbers 0 to 11. From this diagram it will be noticed that the latching of Code Relays I to V is symmetrical about the value 6, with Relay VI indicating whether the number represented is greater or less than this mid-value. To form the complement of a number represented in this way it is only necessary to change the condition of relay VI. Also, a change to basis 10 operation is achieved simply by eliminating relay V from the chain. Figure 8 shows the coding for the same counter position operating on basis 10.

Value	Code Relays Latched
0	None
1	I
2	I II
3	I II III
4	I II III IV
5	I II III IV VI
6	I II III VI
7	I II VI
8	I VI
9	VI
10 (=0)	Carry

Figure 8: Pence Relay Counter on Basis 10

The tens of shillings position (basis 2) is similar in operation, the only differences being that Code Relays I and II alone are used for sterling and additional relays are brought into the chain for decimal work.

Pence Storage Units

As mentioned earlier, pence are punched into a single card column, with X and R punches representing 10 pence and 11 pence respectively. In the 421, X and R times occur out of the sequence of digits 9 to 0. The digits 9 to 0 can be used directly to initiate (for addition) or terminate (for subtraction) the stream of impulses read into the counter. X and R punches cannot be used in this way. Instead, they are entered into delay relays in the Pence Storage Units from First Reading and suitably timed impulses are made available from these storages on the cycle during which the digits 0 to 9 are read from Second Reading, regardless of any intervening programs.

In principle, this method of converting X and R impulses to early 10 and 11 impulses is the same as is described in the Mechanical Counter section of this manual (Section 2). The application of the method is different, however. The Pence Storage Units fitted to machines having Relay Sterling Counters are entirely independent of the counters, and may be used alone for pence listing if so desired. Each unit has a First Reading and a Second Reading Entry. These entry hubs are usually wired from the appropriate reading brushes.*

The First Reading Entry hub (C.1-10) will accept only X and R impulses, which set up one or two delay relays. Digits 9 to 0 are filtered through the Second Reading Entry hub (C.11-15 and C.36-40) to the Pence Storage Exit Units hub (E.11-15 and E.36-40). If a digit 9 to 0 has been sensed, the Pence Storage Exit Tens hub (D.11-15 and D.36-40) does not emit. This hub emits a 1 impulse if 10 pence or 11 pence has been sensed. In this case the Units hub emits a 0 and an early 10, or a 1 and an early 11, as appropriate. The early impulses are used for counter read in, the late (0 and 1) impulses are used for typebar operation when the Storage unit is being used without a counter. The early impulses have no effect on typebars, the late impulses do not interfere with counter operation.

Control Panel Wiring

Control panel wiring for all operations of sterling counters is the same as for decimal counters, except for the pence position input and output and the need for wiring the carries between positions. Carry wiring will be dealt with in Section 4. Only the counter field wiring is described in detail below. Counter control wiring, such as the control of plus, minus, reset and so on, is exactly the same as for decimal counters, as is described in the 421 Manual of Operation.

a. Read In from a Card (Figure 9)

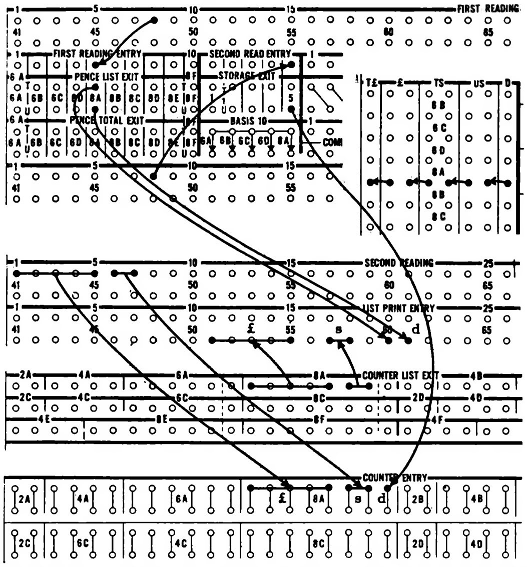


Figure 9: Counter entry, with list printing (field and carry wiring only).

Pence are entered into a counter from a card through one of the Pence Storage Units. These units are entirely independent of the counters, and any one of them could be used. However, it is usually more convenient to wire the one whose hubs are above the counter's Basis 10 hubs; for example, Storage Unit 1 is generally used with counter group 6A and Storage Unit 8 with counter 8D.

---

* When MLP is being used or the accounting machine forms part of a Calculating Group, the First Reading Entry is wired from Second Reading and the Second Reading Entry from Third Reading. This does not in any way affect the operation of the Pence Storage Units. The point to note is that the digits and the zones are read on successive card feed cycles.

The Storage Unit First and Second Reading Entries (C.1-15 and 36-40) are wired from the appropriate reading brushes. The First Reading Entry will only accept X and R impulses and the Second Reading Entry accepts 0 to 9 impulses, so no amounts will be entered twice. The Pence Storage Exit Units hub (E.11-15 and 36-40) filters through 0 to 9 impulses and converts the X and R impulses to early 10 and 11 impulses. The output from this hub is wired to the junior position of Counter Entry to enter all values of pence from 0 to 11 pence in this single counter position. The Pence Storage Exit Tens hub (D.1-10) is not used for entry to a counter.

b. Read In with Pence Listing (Figure 9)

Pence amounts are read into the junior position of a sterling counter as described in (*a*) above. Associated with each sterling counter is a pair of Pence List Exit hubs (D-E. 1-10). These hubs emit, as separate tens and units impulses, whatever amount is being entered into the counter's pence position. The output from these hubs can be taken to typebars to give a printed listing of pence. The Tens Exit hub does not emit if the pence amount is 9 pence or less. The junior position of the normal Counter List Exit hubs is not used for this purpose, as the impulses it emits when 10 pence or 11 pence is being entered into the counter are unsuitable for typebar operation.

c. Total Printing (Figure 10)

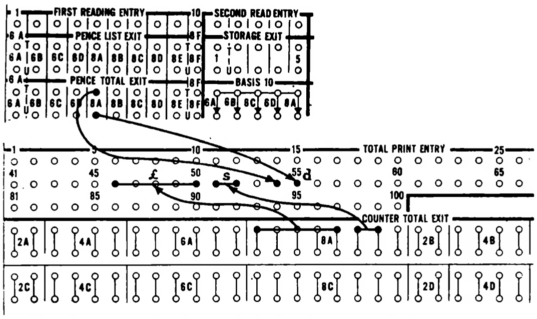


Figure 10: Total printing (field wiring only).

When a sterling counter is read out, the contents of its pence position are made available as separate tens and units impulses at the counter's Pence Total Exit hubs (F-G. 1-10). If the position contains 9 pence or less, the Tens Exit does not emit. The output from these hubs is used to cause totals to print on two typebars. The output from the junior position of the counter's Total Exit hubs when the position contains 10 pence or 11 pence is unsuitable for typebar operation.

d. Transfer to a Counter (Figure 11)

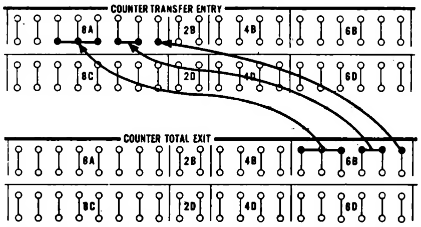


Figure 11: Sterling counter transfer (field wiring only).

Control panel wiring for total transfer between sterling counters is the same as that for transfer between decimal counters: the Counter Total Exit hubs, including the junior position, of the emitting counter are wired to the Counter Transfer Entry hubs of the receiving counter. It should be remembered that the special sterling counter positions can only be wired to the corresponding positions of the receiving counter. For example, if a 6-position sterling counter and a 2-position counter are to be coupled to receive a total from an 8-position sterling counter, the 2-position counter must be used for the *senior* positions of the combination, so that pence and tens of shillings can be received into their correct positions of the 6-position sterling counter.

e. Transfer to a Storage Unit (Figure 12)

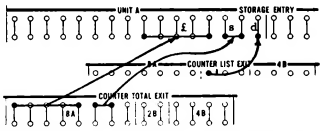


Figure 12: Transfer to a storage unit (field wiring only).

When the pence position of a relay sterling counter is read out, the junior position of the counter's *List Exit hubs* emits an X or an R impulse if the position contains 10 pence or 11 pence. It also emits the appropriate digit if the position contains 9 pence or less. These impulses may be entered into a storage unit and are then in the correct form for summary punching from storage. The remaining positions of the sterling field are wired to the storage unit in the normal way, that is, from Counter Total Exits to Storage Unit Entries.

f. Summary Punching

Wiring for summary punching from sterling counters is the same as that for punching from decimal counters. The Counter Punch Exits are wired to Summary Punch Entry hubs. Pence are thereby punched into a single column of the summary card, with an X punch representing 10 pence and an R punch for 11 pence.

g. List Printing without Accumulating (Figure 13)

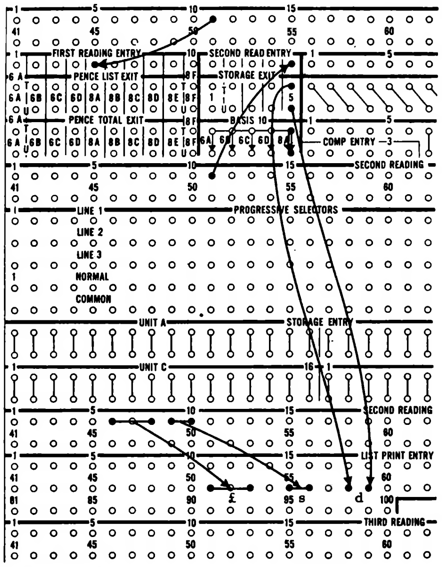


Figure 13: List printing from a pence storage unit.

If a Pence Storage Unit is not required for entering pence into a counter, it may be used independently for direct list printing of pence amounts from a card. The First and Second Read Entries of the Pence Storage Unit are wired from the pence column at First and Second Reading respectively. Zone punches representing 10 pence and 11 pence are entered into the unit's

First Read Entry and are converted within the unit into a form suitable for printing on two typebars. Separate tens and units impulses are emitted from the Storage Exit Tens and Units hubs on the following card feed cycle (the cycle on which other data on the card are read at Second Reading). Amounts of 9 pence or less are filtered through the Storage Exit Units hub while the card is at Second Reading. In this case, the Storage Exit Tens hub does not emit impulses.

Section 4: Carry Wiring

When a decimal counter wheel turns from 9 to 0, a carry impulse is automatically passed on to the next higher order wheel in the counter to cause this latter wheel to add 1 to its total. For example, if 27 is added into a 2-position counter which already contains 36, the units wheel turns from 6 to 3 and the tens wheel from 3 to 5. This gives 10 less than the correct answer 63 because the 3 in the units wheel really represents 13 (=7+6). The additional ten must be carried over by adding 1 into the tens wheel.

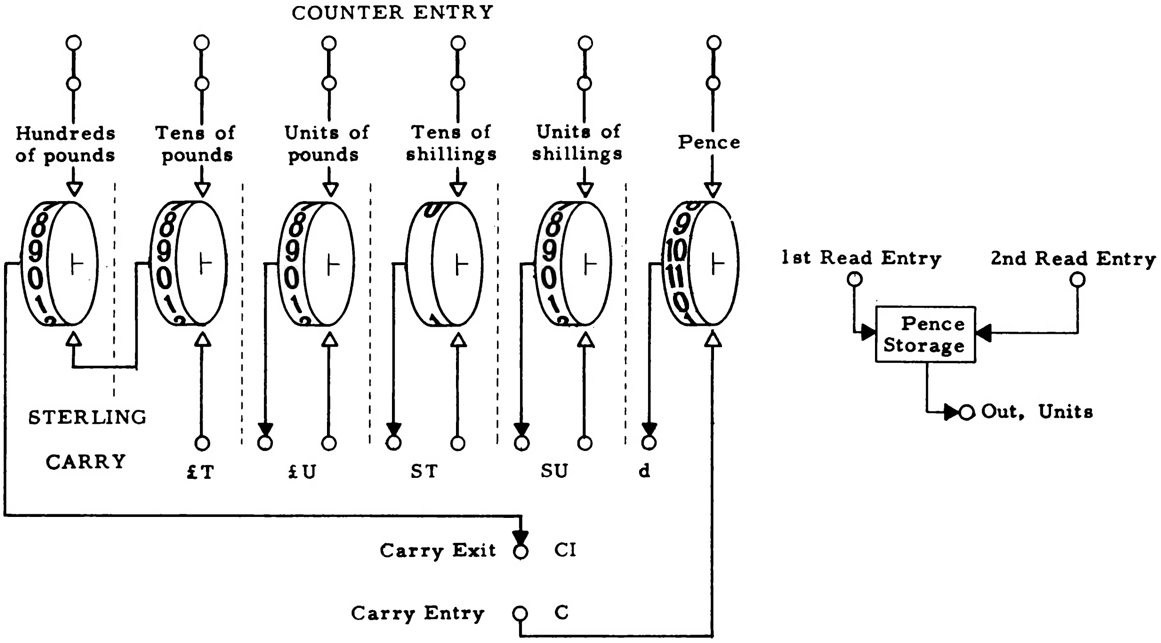


Figure 14: Schematic of internal connections for a six-position sterling counter.

In the decimal counter group, the wires needed to pass on the carry impulses between wheels are internal. For sterling counters, only the carries between the tens of pounds wheel and those senior to it are internally wired. Carries between the junior wheels have to be wired on the control panel (Sterling Carries hubs: W-AF.41-48 and AD.49-52). This permits the arrangement of the wheels within the group to be varied at will.

However, for the majority of sterling applications, the carries are wired as shown at A in Figure 15.

The units of pounds wheel is provided with separate carry entry and exit hubs so that it may be used, for example, to accumulate decimals of a penny. For this application, the carry hubs are wired as shown at C in Figure 15. This is the usual method of accumulating half-pence, which must be punched in the card as 5 and may be printed as .5*d* or, by means of a special slug in the 5 position of a typebar, as ½*d*. To accomodate farthings, a 2-position counter may be coupled to the sterling counter and ¼*d* treated as .25*d* and ¾*d* as .75*d*.

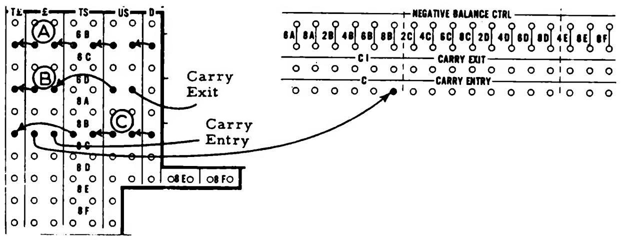


Figure 15: Carry wiring:
A. Normal sterling and decimal with Basis 10.
B. Decimal without Basis 10.
C. Sterling with one decimal place of pence.

The carry entry and exit hubs also permit a sterling counter to be used for a variety of non-decimal weights and measures. These variations, and decimal operation, are discussed in the next section. If negative balances are possible, care must be taken in altering the order of the senior counter positions. It should be noted that only the senior wheel of a counter is able to detect a negative balance. For example, it is not possible to wire the tens of shillings wheel as the senior position of a counter if negative balance control is required.

Section 5: Non-Sterling Uses

a. Decimal

Sterling counters can, if required, be used to accumulate decimal amounts by special wiring. The special tens of shillings and pence positions are not used and so an 8-position sterling counter becomes a 6-position decimal counter and a 6-position sterling counter serves as a 4-position decimal counter. The carries between the decimal wheels must be wired; Figure 15B shows the usual method of carry wiring. The normal counter Carry Entry hub is rendered inoperative by this procedure, and carries for negative balance control or for counter coupling must be taken into the carry entry hub of the units of shillings wheel. Figure 14 should make the reason for this apparent.

Relay sterling counters have an advantage over mechanical sterling wheels in that the special positions may easily be converted to decimal operation by jackplugging the counter's Basis 10 switch (F-G.11-15 and F-G. 36-40). This enables a sterling counter to be used decimally without loss of capacity – an 8-position sterling counter, for example, is converted to a 8-position decimal counter. The carries between positions must still be wired as shown in Figure 15A. The Basis 10 jackplug may not be wired through a selector. It is, however, frequently wired through an alteration switch.

b. Non-Decimal

The flexibility of operation offered by the variation of carry wiring makes it possible to handle a wide range of special numerical systems. Two examples – dozens and units, and tens and hundredweights – are illustrated in Figures 16 and 17 respectively. These basic principles can be applied to or extended to cover numerous other systems.

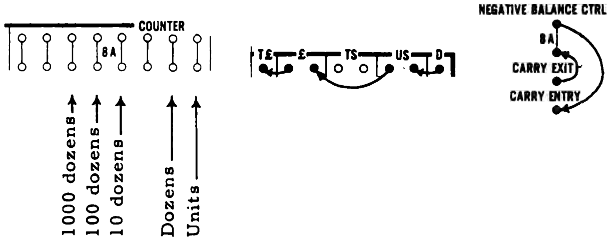


Figure 16: Accumulation of dozens and units, with provision for negative balances.

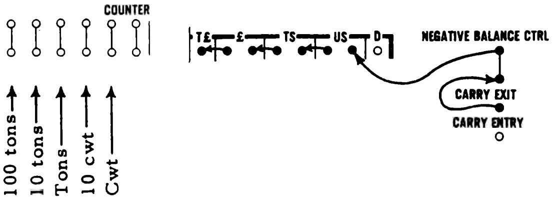


Figure 17: Accumulation of tons and hundredweights, with provision for negative balances.

Section 6: Sterling Printing

Sterling is conventionally printed without zeros in the tens of pence and tens of shillings positions, but zeros are required in the units positions if the number of shillings or pence is zero. For example:

£	s	d
3	12	10
2	6	4
	2	6
8	10	0
4	0	0

The sterling devices on the 421 Accounting Machine are designed to give this format *automatically* when the appropriate exits are wired to alphanumeric typebars. To this end, the tens of shillings hubs of Counter List Exits and Counter Total Exits, and the tens of pence hubs of Pence List Exit, Pence Total Exit, Pence Storage Exit and Pence List device exits do not emit zeros if the amount to be read from their associated units is less than 10. For example, if a sterling counter containing £4.16.8 were to be read out, the tens of shillings hub of Counter Total Exit would emit a 1 but the Pence Total Exit Tens would emit nothing. If the amount had been £4.8.0, neither the tens of shillings Total Exit hub nor the Pence Total Exit Tens hub would have emitted, and the Pence Total Exit Units hub would have emitted 0.

If, however, numeric typebars are to be used, suppression of zeros at the exit hubs is not sufficient to prevent unwanted zeros printing. Zeros on numerical typebars are printed not electrically, by 0 impulses wired to the Print Entry, but mechanically, by virtue of significant digits to the left. Hammersplit levers can be raised to prevent these zeros printing. Figure 18 shows the appearance of sterling fields printed on numeric typebars, both with and without hammersplit levers raised on the junior digits of the pounds, shillings and pence fields.

Raising hammersplit levers in this fashion unfortunately prevents the printing of zeros in the units positions of zero shillings and pence fields, as can be seen from form number 2 in Figure 19. To cause these zeros to print, sterling carry clips are used, fitted on to the units pounds, units shillings and units pence positions, as shown in Figure 18. Two sizes of sterling carry clip are available: short, for printing pounds, shillings and pence fields on adjacent typebars, and long, for printing sterling fields with one typebar space between the pounds and shillings and between the shillings and pence. The space is usually dispensed with if the preprinted stationery has light rulings to separate the columns, as shown on the stationery in Figures 19 and 20 overleaf. If the stationery does not have these rulings, then a space is preferable for clarity.

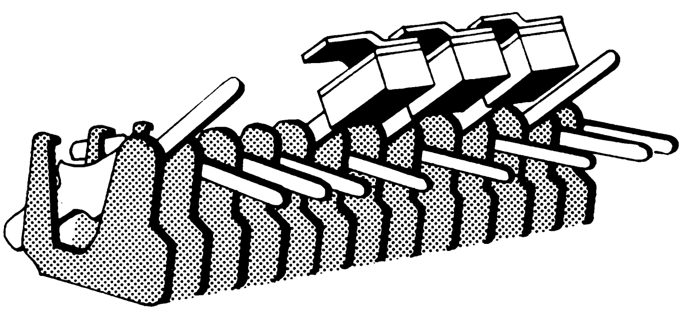
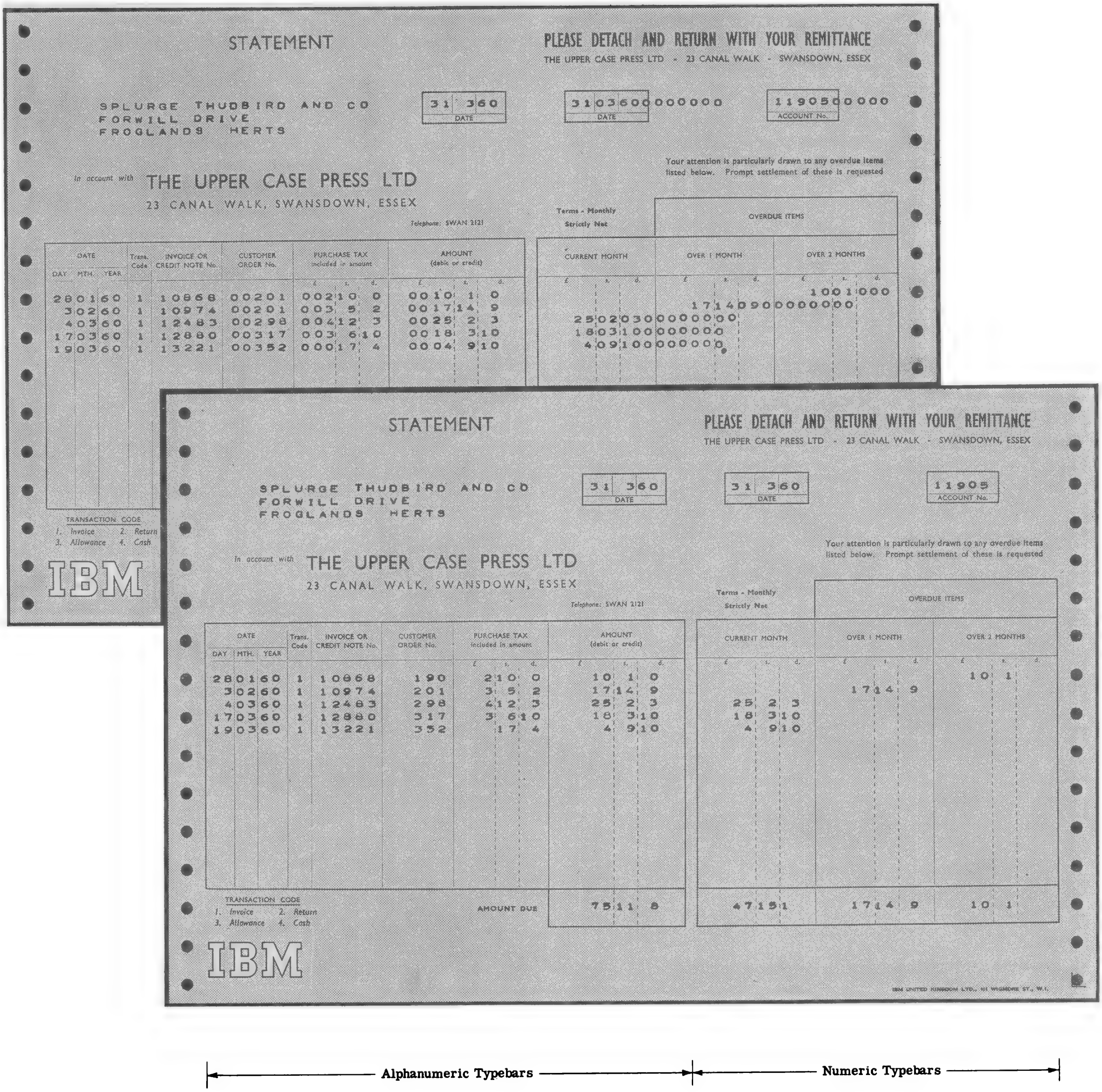


Figure 18: Raised hammersplit levers and sterling carry clips.

When printing sterling on numeric typebars, care must be taken to ensure that the raised hammersplits and sterling carry clips do not interfere with other fields printed on the same typebars. Figure 20 gives an example in which good use is made of the sterling format for printing a date above one of the sterling fields. This problem does not arise with sterling printed on alphanumeric typebars.


Alphanumeric Typebars
Numeric Typebars

STATEMENT

PLEASE DETACH AND RETURN WITH YOUR REMITTANCE
THE UPPER CASE PRESS LTD - 23 CANAL WALK - SWANSDOWN, ESSEX

SPLURGE THUDBIRD AND CO
FORWILL DRIVE
FROGLANDS HERTS

DATE: 31 360

DATE: 310360000000

ACCOUNT No.: 1190500000

In account with THE UPPER CASE PRESS LTD
23 CANAL WALK, SWANSDOWN, ESSEX
Telephone: SWAN 2121

Your attention is particularly drawn to any overdue items listed below. Prompt settlement of these is requested

Terms - Monthly
Strictly Net

DATE DAY MTH. YEAR	Trans. Code	INVOICE OR CREDIT NOTE No.	CUSTOMER ORDER No.	PURCHASE TAX included in amount £	s.	d.	AMOUNT (debit or credit) £	s.	d.
280160	1	10868	00201	002	10	0	0010	1	0
30260	1	10974	00201	003	5	2	0017	14	9
40360	1	12483	00298	004	12	3	0025	2	3
170360	1	12880	00317	003	6	10	0018	3	10
190360	1	13221	00352	000	17	4	0004	9	10

OVERDUE ITEMS

CURRENT MONTH £ s. d.	OVER 1 MONTH £ s. d.	OVER 2 MONTHS £ s. d.
		1001000
	17140900000000	
25020300000000		
18031000000000		
4091000000000		

TRANSACTION CODE
1. Invoice 2. Return
3. Allowance 4. Cash

IBM

STATEMENT

PLEASE DETACH AND RETURN WITH YOUR REMITTANCE
THE UPPER CASE PRESS LTD - 23 CANAL WALK - SWANSDOWN, ESSEX

SPLURGE THUDBIRD AND CO
FORWILL DRIVE
FROGLANDS HERTS

DATE: 31 360

DATE: 31 360

ACCOUNT No.: 11905

In account with THE UPPER CASE PRESS LTD
23 CANAL WALK, SWANSDOWN, ESSEX
Telephone: SWAN 2121

Your attention is particularly drawn to any overdue items listed below. Prompt settlement of these is requested

Terms - Monthly
Strictly Net

DATE DAY MTH. YEAR	Trans. Code	INVOICE OR CREDIT NOTE No.	CUSTOMER ORDER No.	PURCHASE TAX included in amount £	s.	d.	AMOUNT (debit or credit) £	s.	d.
280160	1	10868	190	2	10	0	10	1	0
30260	1	10974	201	3	5	2	17	14	9
40360	1	12483	298	4	12	3	25	2	3
170360	1	12880	317	3	6	10	18	3	10
190360	1	13221	352		17	4	4	9	10
						AMOUNT DUE	75	11	8

OVERDUE ITEMS

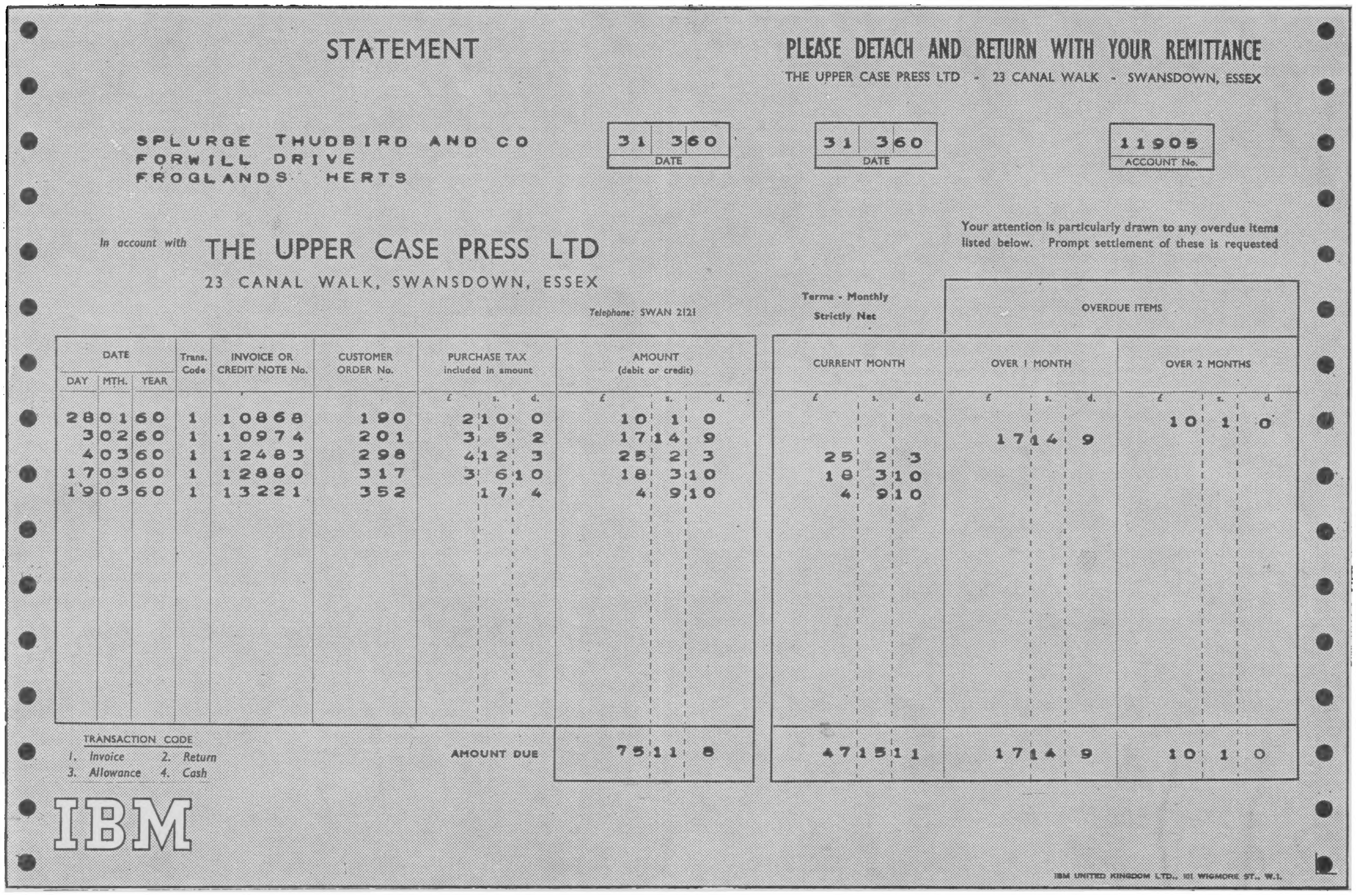
CURRENT MONTH £	s.	d.	OVER 1 MONTH £	s.	d.	OVER 2 MONTHS £	s.	d.
						10	1	
			17	14	9			
25	2	3						
18	3	10						
4	9	10						
47	15	1	17	14	9	10	1	

TRANSACTION CODE
1. Invoice 2. Return
3. Allowance 4. Cash

IBM

IBM UNITED KINGDOM LTD., 101 WIGMORE ST., W.1.

Figure 19: Sterling reports showing the effects of:
1. No sterling carry clips or raised hammersplits.
2. Correctly raised hammersplit levers, but no sterling carry clips.



STATEMENT

PLEASE DETACH AND RETURN WITH YOUR REMITTANCE

THE UPPER CASE PRESS LTD - 23 CANAL WALK - SWANSDOWN, ESSEX

SPLURGE THUDBIRD AND CO
FORWILL DRIVE
FROGLANDS HERTS

31 360	DATE
31 360	DATE
11905	ACCOUNT No.

In account with THE UPPER CASE PRESS LTD
23 CANAL WALK, SWANSDOWN, ESSEX
Telephone: SWAN 2121

Your attention is particularly drawn to any overdue items listed below. Prompt settlement of these is requested

Terms - Monthly
Strictly Net

DATE			Trans. Code	INVOICE OR CREDIT NOTE No.	CUSTOMER ORDER No.	PURCHASE TAX included in amount			AMOUNT (debit or credit)			CURRENT MONTH			OVERDUE ITEMS					
															OVER 1 MONTH			OVER 2 MONTHS		
DAY	MTH.	YEAR				£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.
28	01	60	1	10868	190	2	10	0	10	1	0							10	1	0
3	02	60	1	10974	201	3	5	2	17	14	9				17	14	9			
4	03	60	1	12483	298	4	12	3	25	2	3	25	2	3						
17	03	60	1	12880	317	3	6	10	18	3	10	18	3	10						
19	03	60	1	13221	352		17	4	4	9	10	4	9	10						
						AMOUNT DUE			75	11	8	47	15	11	17	14	9	10	1	0

TRANSACTION CODE
1. Invoice *2. Return*
3. Allowance *4. Cash*

IBM

IBM UNITED KINGDOM LTD., 101 WIGMORE ST., W.1.

Figure 20: Correctly printed sterling report.

© 1960 by
IBM United Kingdom Limited
101 Wigmore Street, London W1

Printed in England at the Taurus Press

UK Form 23-5901

IBM 421 Sterling

UK Form 23-5901
Printed in England

© 1960 by IBM United Kingdom Limited